

Claims

We Claim:

1. A colour picture tube comprising an essentially rectangular shadow mask, a mask frame composed of transverse bars and longitudinal bars and supporting said shadow mask, a shielding cap mounted on said mask frame, and a shielding plate secured to a longitudinal bar of the mask frame and covering at least part of the outer side of said longitudinal bar.
2. A colour picture tube according to claim 1, wherein the shielding plate is welded to the mask frame.
3. A colour picture tube according to claim 1, wherein the shielding plate is made of a highly permeable material.
4. A colour picture tube according to claim 1, wherein the shielding plate is a multi-part component.
5. A colour picture tube according to claim 4, wherein the shielding plate is a two-part component.
6. A colour picture tube according to claim 4, wherein the shielding plate is a four-part component.
7. A colour picture tube according to claim 1, wherein the shielding plate is provided with at least one slot for influencing the magnetic flux.
8. A colour picture tube according to claim 7, wherein at least one slot in the shielding plate is oriented at right angles to the longitudinal direction of the bar.

9. A colour picture tube according to claim 7, wherein the position of the at least one slot in the shielding plate is oriented according to the position of a slot provided in the shielding cap.
10. A colour picture tube according to claim 1, wherein the shielding plate is implemented such that it also fulfils the function of an electron shield.
11. A colour picture tube according to claim 10, wherein the shielding plate essentially covers the side of the longitudinal bar of the mask frame facing the electron gun of the colour picture tube, said mask frame having the shielding plate secured thereto.
12. A colour picture tube according to claim 1, wherein the shielding plate is L-shaped.
13. A colour picture tube according to claim 1, wherein the shielding plate is U-shaped.
14. A colour picture tube according to claim 13, wherein the shielding plate is welded to both sides of the longitudinal bar.
15. A colour picture tube according to claim 13, wherein the shielding plate is additionally welded to the ends of the transverse bars.
16. A colour picture tube according to claim 13, wherein the shielding plate includes a further portion facing the interior of the colour picture tube, said portion being located on the inner side of the mask frame.
17. A colour picture tube according to claim 15, wherein the further portion of the shielding plate is welded to the longitudinal bar.
18. A colour picture tube according to claim 1, wherein the shielding plate has provided therein clip holes for securing the shielding cap in position.

19. A colour picture tube according to claim 1, wherein the shielding cap is adapted to be clipped onto the mask frame.

20. A colour monitor or television set with a colour picture tube according to claim 1.

21. A manufacturing method for a colour picture tube comprising a glass body, which is composed of a screen tray and a cone, said method comprising the steps of:

producing a mask frame from transverse bars and longitudinal bars,

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inserting a mask into the mask frame, said mask and mask frame defining together a mask/frame combination,

inserting the mask/frame combination into the screen tray,

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applying a luminescent layer to the inner side of the screen,

fastening a shielding cap to the mask frame, and

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connecting the screen tray and the cone,

wherein a shielding plate is mounted on at least one longitudinal bar of the mask frame prior to inserting the mask/frame combination into the screen tray.

22. A manufacturing method according to claim 21, wherein the shielding plate is welded to the mask frame.

23. A manufacturing method according to claim 22, wherein the shielding plate is welded to the outer side of the longitudinal bar.

24. A manufacturing method according to claim 22, wherein the shielding plate is additionally welded to the inner side of the mask frame.

25. A manufacturing method according to claim 24, wherein the shielding plate is welded to the longitudinal-bar side facing the interior of the colour picture tube.
26. A manufacturing method according to claim 24, wherein the shielding plate is welded to the ends of the transverse bars.
27. A manufacturing method according to claim 26, wherein the shielding plate is welded, via an additional portion, to the longitudinal-bar side facing the electron gun of the colour picture tube.
28. A manufacturing method according to claim 21, wherein the shielding cap is clipped onto the mask frame during the fastening step.
29. A manufacturing method according to claim 28, wherein the shielding cap is clipped onto the mask frame via clip holes provided in the shielding plate.